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Integral Program

Saint Mary's College of California

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INTEGRAL PROGRAM

The Integral Program of liberal arts is founded on the wager that it is still possible to appreciate and to evaluate all the main kinds of human thinking. It is thought that students in the Program can learn enough of the technical languages of the natural sciences, mathematics, literary criticism, social sciences, philosophy and theology to follow arguments in those disciplines. The Integral Program is not an honors curriculum but is intended rather for anyone drawn to a comprehensive view of education, an education devoted equally to the arts of language, to the arts of pure and applied mathematics (including music), to observation and measurement, to judgment and reasoned appreciation.

The program is divided into the seminar and the tutorials: language, mathematics, laboratory and music. During the fourth year, seniors are asked to marshal their experiences from seminar and tutorials to write a major essay and then defend it before the tutors and the other students.

The program had its origin in a two-year study beginning in the fall of 1955 and financed with a grant from the Rosenberg Foundation. Brother Sixtus Robert Smith, FSC, and James L. Hagerty of the faculty joined with consultants from Saint John's College, Annapolis, the University of California Berkeley and Stanford University, to establish this "college-within-a-college." The first graduates were the class of 1960. From the beginning, a confident grasp of fundamental truths, a healthy skepticism toward passing dogma, and a reliance on reasoned deliberation has marked the graduates of the program.

TUTORS

Joseph Zepeda, PhD, *History and Philosophy of Science, Director*

Steven Cortright, MA, *Philosophy*

Brother Kenneth Cardwell, FSC, PhD, *Rhetoric*

Theodora Carlile, PhD, *Emerita*

Alexis Doval, PhD, *Theology*

Elizabeth Hamm, PhD, *History and Philosophy of Science and Technology*

Felicia Martinez, PhD, *English*

Brother Raphael Patton, FSC, PhD, *Emeritus*

Gabriel Pihás, PhD, *Social Thought, on leave 2018–19*

Michael Riley, PhD, *Classical Languages*

Theodore Tsukahara, Jr. AFSC, PhD, *Economics*

Brother Martin Yribarren, FSC, PhD, *Music*

LEARNING OUTCOMES

Students who complete the program will demonstrate:

- **THE CAPACITY** for disciplined examination and discussion of fundamental ideas and questions, as treated or suggested by some of the great written texts; and
- **AWARENESS** of variations in the kinds and degrees of knowledge attainable in different fields of inquiry, acquired through active use of the resources employed in those fields, e.g., experience, reflection, hypothesis, experiment, measurement and inference; and
- **ABILITY** for close reading and listening, for precise verbal formulations of questions, distinctions, concepts, arguments, and judgments, and facility at addressing and responding to classmates' like contributions; and
- **WELL-DEVELOPED COMPETENCE** in written formulation of questions, distinctions, concepts, arguments, and judgments.

REQUIREMENTS

An alternative, comprehensive curriculum, the program offers a bachelor's degree proper to it. The degree is granted for the successful completion of the eight seminars, the eight tutorials in mathematics, the eight in language, the four laboratories, a tutorial in music and the senior essay totaling 29.25 course credits. Note that the College further requires the successful completion of four January course credits, and of electives sufficient to complete Core Curriculum learning outcomes in Community Engagement, American Diversity, and Social Cultural and Historical Understanding (1 course credit), and to raise the total to 36 course credits.

PREREQUISITES

Each course in the program beyond the first semester depends in an obvious way entirely on the courses taken earlier, making it impossible to join the Program later than the freshman year. In extraordinary cases, a remedial course in January may allow a freshman entrance in February.

Any course in this program with a prerequisite assumes a grade of C– or better in the prerequisite course.

C O U R S E S
SEMINARS**11-12 Freshman Seminar**

Homer, Aeschylus, Herodotus, Sophocles, Euripides, Aristophanes, Plato, Aristotle and Euripides.

113-114 Sophomore Seminar

The Law and Prophets, Psalms, Gospels and selected Epistles, Virgil, Lucretius, Tacitus, Plotinus, Epictetus, Augustine, Anselm, Aquinas, Dante, Chaucer, Rabelais, Machiavelli, Luther, Montaigne and Shakespeare.

115-116 Junior Seminar

Cervantes, Descartes, John of the Cross, Milton, Spinoza, Pascal, Corneille, Racine, Molière, Hobbes, Swift, Locke, Berkeley, Fielding, Leibniz, Hume, Boswell, Kant, Diderot, Rousseau, Voltaire, Blake and the Federalist Papers.

117-118 Senior Seminar

Goethe, Austen, Bernard, Hegel, Flaubert, Marx, Dostoevski, Kierkegaard, Melville, Twain, Tolstoi, Nietzsche, William James, Freud, Proust, Joyce, Heidegger, and a selection of modern authors.

196 Senior Essay (.25)

The writing and defense of an essay under the direction of a tutor chosen by the student. This course is directed by the leader of the Senior Seminar.

TUTORIALS**31-32 Freshman Mathematics**

The *Elements* of Euclid, the *Almagest*, Book 1, of Ptolemy.

133-134 Sophomore Mathematics

The *Almagest*, the *Conic Sections* of Apollonius, selections from *Copernicus*, *On the Revolutions of the Heavenly Spheres*.

135-136 Junior Mathematics

The *Geometry* of Descartes, Newton's *Principia Mathematica*, an introduction to calculus.

137-138 Senior Mathematics

Lobachevsky's *Theory of Parallels*, Dedekind's *Theory of Numbers* (selections), Einstein's *Relativity*, selections from Hilbert, Poincaré, Coexter and Feynman.

51-52 Freshman Language

Grammar and expression: introduction to Greek vocabulary, morphology and syntax, the nature and function of parts of speech, phrases and clauses; thought and the author's language: exercises taken from Herodotus, Plato, Sophocles, Thucydides, the *New Testament*, Aristotle, Euripides and Sappho.

53-54 Sophomore Language

Logic and dialectic: analysis and translation of Greek authors, with emphasis on dialectical investigation in Plato's *Phaedo*, *Theatetus*, *Sophist*, *Phaedrus*, and in Aristotle's *Prior* and *Posterior Analytics*.

155-156 Junior Language

English and American poetry and rhetoric; close reading and discussion of a comedy, a tragedy and a romance of Shakespeare, poems of Wordsworth, Keats, Dickinson, Stevens, Yeats; political rhetoric in Jefferson, Lincoln and Martin Luther King, Jr.; works on prejudice by Melville, Hawthorne, Douglass and O'Connor.

157-158 Senior Language

Dialectic ancient and modern; occidental and oriental: Plato's *Philebus*, *Cratylus* and *Parmenides*, Aristotle's *Metaphysics*, the *Tao Te Ching* of Lao Tzu, *Analects of Confucius*, and selections from *Chuang Tzu* and the *Upanishads*; Kant's *Perpetual Peace*, Wittgenstein's *Philosophical Investigations* (selections), Shusaku's *The Silence*, the *Qur'an* (selections).

71-72 Freshman Laboratory

Observation, description and measurement in optics, astronomy, statics and acoustics. Field and laboratory study of plants and birds. Readings: Aristotle, Galen, Archimedes, Euclid, Ptolemy, and Harvey.
Fee: \$75 per term.

74 Music I

Introduction to basic terminology, notation, diatonic scale, rhythm and chords. Reading of early texts on music and group participation in making music. *Fee: \$75.*

174 Music II

An optional extension to the Music I class for more careful treatment of theory and performance. This course is not required for the degree.

Integral 178 Junior Laboratory: Physics & Chemistry

This Laboratory combines readings and discussion with practical experiments. It is the examination of first principles of physics and chemistry. Readings range from Galileo, Black, Lavoisier, Dalton, Thompson, Gay Lussac, Avogadro, Cannizzaro, Berzelius, Faraday, Mendeleev, and others, concluding with a look at quantum theory. Course replaces **Integral 175**. *Fee: \$75.*

Integral 179 Junior Laboratory: Evolution, Heredity & Genetics

This Laboratory focuses on the biological, beginning with Darwin and moving to heredity and genetics with Mendel, Sutton, Morgan, Wilson, Dawkins, Ruse and others. Course replaces **Integral 176**. *Fee: \$75.*

180 Preceptorial

An elective, 0.25 credit examination, or re-examination, of a text or topic of interest to students and tutor; may be repeated as texts or topics vary.